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Hone's Avocado Nursery

BOKEELIA, FLA.



Ten Years with Avocados and Mangoes in Lee County



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THE AVOCADO

The Avocado is a native of Central and South America and climatic conditions in Southern Florida are suitable for its culture.

Trees, which ripen their fruit in late summer and fall, have been grown in Florida probably for a hundred years or more, though it is only since 1901, when the first trees were propagated commercially, that plantings of any acreage have been made.

Fruit of commercial size is from 12 oz. to 2 lbs.; shape varies from round to pear-shaped and in color from green to purple and almost black. Skin of some varieties is thin, as of apples, and ranges all the way up to being almost woody, brittle, ¼ of inch thick. The seed usually conforms to the shape of the fruit and is anywhere from 8 to 30% of its weight.

The edible part, which lies between the skin and the seed is of buttery consistency, yellow or greenish yellow in color and of a peculiarly rich, nutty flavor, and contains a high percentage of oil.

Avocados are ripened off the tree, from one to two weeks after picking. They are not fit to eat until thoroughly ripe. They are usually eaten with a little seasoning of salt, pepper, lime juice or vinegar, but when you know what to look for, taken plain with just a little salt they are at their best.

Owing to the chemical composition of the fruit, which contains about $2\frac{1}{2}\%$ of protein, 20% of fat, about 7% of carbohydrates with traces of sugar and $1\frac{1}{2}\%$ of mineral matter, all factors which are much sought after in food, its value is great, and it is known that the nutrition of the avocado is not only even with lean meat but more easily digested.

With the introduction of varieties which extend the ripening season through the winter and spring, the future of the Avocado is settled and the prediction is made, by men who know, that the time is coming when Avocado culture will be more important than Citrus culture in Florida.

For better classification, Avocados are divided into three races: West Indian, Guatemalan and Mexican.

WEST INDIAN

Trees of this race, which come from tropical lowlands and include our Florida seedlings, are tropical and while they are young will not stand much below 32 degrees and for full grown trees 26 to 28 degrees are about the limit.

Trees of commercial varieties are symmetrical, good stocky growers, prolific bearers, ripen their fruit from August to December. Skin of the fruit is leathery and pliable, about 1-16 of an inch thick; they ship well.

POLLOCK—Fruit green, pear-shaped, of best quality, weighs from 1½ to 3 lbs., seed averages from 5 to 6 ozs. in 3-lb. fruit, ripens August to October. Tree is good strong grower.

McCANN—Fruit green, pear-shaped, of superior quality, weighs 22 to 24 oz. Seed, medium, about 20%, tight in the cavity, ripens September to December. Tree is good grower and very prolific bearer. Seed for the original parent tree in Fort Myers was brought from Yucatan.

TRAPP—Up to a few years ago the most extensively planted Avocado. Fruit green, almost round, good quality, weighs 20 to 24 oz. Ripens October to December.

WALDIN—Fruit broadly pear-shaped, color green, weighs about 1½ lbs., ripens October to December. Tree is prolific. On the East Coast is planted extensively.

Being the most suitable for our soil conditions, this race is used for stock for propagating of practically all other Avocados in Florida.

GUATEMALAN

Avocados of this race were not known in Florida ten years ago; they have been introduced from Guatemala, partly through California and partly through the Government Plant Introduction Department, and established firm hold. In Guatemala they grow in altitude of from 2500 to 6500 feet above the sea-level, where frost occasionally occurs and will stand about four degrees lower temperature than the West Indian race.

Trees are vigorous growers and consequently not such heavy producers while young as the West Indian, which is a good point as it is better to grow first a good, healthy, well-branched tree and have it ready to support the crop.

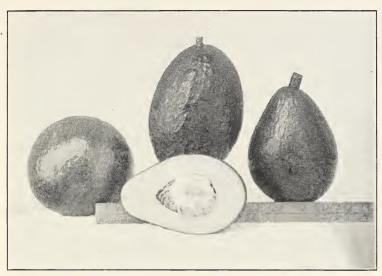
The skin of the fruit as a rule is thick, more or less rough, brittle and in some varieties almost woody. Seed is usually small to medium, tight in the cavity. They ripen from December to April.

From the standpoint of commercial value they have the most promising future as they are reasonably hardy, ripen in winter and will stand shipping well.

WINSLOWSON is West Indian and Guatemalan hybrid. Fruit nearly round, green, weighs about 1½ lbs., ripens November and December. Tree is an exceptionally good grower and prolific.

PANCHOY—Fruit pear-shaped, color green, slightly rough, weighs 20 to 24 oz., ripens December to January. Tree is good grower and prolific bearer.

LINDA—Fruit oval, deep purple in color, of excellent quality, weighs about 2 lbs. and has very small seed, ripens January and February. Tree is good grower and regular bearer.



Trapp, W. II. 26 ozs.

Linda, G. 2 lbs. Fuerte, G. x M. 16 ozs.

Taft, G. 22 ozs.



Part of 4-year-old Grove Character of land on which trees are planted

TAFT--Fruit green, pear-shaped, weighs 16 to 24 oz., of fine quality, ripens January to March.

NIMLIOH—Fruit green, oval in shape, one of the largest varieties, weighs from 2 to 2½ lbs., ripens January to March. Tree is vigorous grower.

WAGNER—Fruit almost round, green, weighs 1 to $1\frac{1}{2}$ lbs., ripens January to March. Tree fairly vigorous and very productive, highly praised on the East Coast.

McDONALD—Fruit almost round, deep purple in color, slightly rough, weighs 12 to 16 oz., ripens from February to April. Tree is good grower and very productive.

MEXICAN

Varieties of this race have been introduced from Central and Northern Mexico and are the hardiest; they will stand about 4 to 6 degrees lower temperature than the Guatemalan. Trees are vigorous and upright growers and the foliage has the scent of anise.

Fruit, which ripens in summer and fall, is rather small, very seldom over a pound in weight, with thin skin, of the best quality and very rich in oil, averaging from 25% to 30%.

In more exposed localities, the Mexican Avocados are fine for home use and for the local trade.

FUERTE—One of the hardiest Avocados; it is a Guatemalan and Mexican hybrid. Fruit green, pear-shaped with thin skin. Weighs 14 to 18 oz., very rich, fine quality, ripens November to January. Tree is strong and vigorous.

GOTTFRIED—Fruit pear-shaped, purplish black, about a pound in weight, of the very best quality, ripens August to September. Tree is vigorous grower.

PUEBLA—Fruit purplish black, pear-shaped, weighs 12 to 14 oz., very rich, fine quality, ripens September to October. Prolific bearer and should be in every collection.

PLANTING AND TAKING CARE OF YOUNG TREES

Having been a nurseryman for twenty-four years, the last ten of which I have spent with Avocados and Mangoes in Florida, I would offer a few suggestions for planting and taking care of young trees.

While we are talking about hardy Avocados, it pays well to have for them as much of natural protection as possible; a big body of water, lying north of you, is one of the best locations.

Avocados will succeed on quite a wide range of soil, though they need a great deal of organic ammonia for their proper development, and, considering that there is expected from them more in return than from any other trees, it is only fair to give them the best land and location possible.

One thing they must have is proper drainage, and as the most protected localities along the West Coast are level pinelands, it is advisable to plant on beds.

Stake the rows 24 feet apart and plow several times, until the difference between the water-furrow and the top of the bed is from 18 to 24 inches; trees in the rows should be spaced 20 feet.

One of the best things in preparing holes is to put in a bushel of well rotted stable manure and mix it well with the soil; it is better if it is left standing for a few weeks to settle.

Our trees are grafted and grown in wooden boxes, in which they are also shipped. When ready for planting, be sure that they are thoroughly moist in the boxes, then make the hole, lay the box with the tree down and remove the bottom with a hatchet, place the box with the tree in the hole at the proper height (which is, when everything is leveled off that th union of the tree is on a level with the top of the bed) put about three inches of soil around the box, split it on two opposite sides and remove the boards, fill the hole about half way with the soil and press it down, fill the balance up to the union and pack it down firmly, though with care that the roots will not be disturbed.

Now make a large basin around the tree and give two buckets of water. When the water soaks in throw a little dry, loose soil over the moistened part, to prevent quick evaporation, and place mulching of dry grass or anything that is handy, about 3 or 4 inches thick and about 4 feet in diameter around the tree.

When the trees are planted in spring and summer they should be shaded for the first season.

The principle about shading is quite often misunderstood. The foliage on a growing tree very seldom gets injured by sunburn in Florida, except when the tree dries out and gets wilted. The most damage is done when the trunk is exposed on the south side; the sun's rays hit the ground, reflect from th grains of sand, everyone of which act as a lens, and are thrown on the little trunk about half an inch from the ground, burning it. The burned space widens east and west, and in a few days encircles the tree, which still will have a green top for a few days but is hopelessly lost.

A little frame made of lath on which a burlap sack is nailed, supported by four lath stuck in the ground around the tree so that it throws shade not only on the top of the tree but also on the trunk from 9 to 3 o'clock, answers the purpose best.

During the first season the young tree must have plenty of water and needs in dry weather 2 or 3 buckets of water every week.

Taking care of trees, which have been planted in spring and early summer, may call for a little more expense, though it pays well; they not only get established and make good growth, but also

in case they need protection in winter they are in better shape and can be handled easier.

In well protected localities trees planted in October or at the end of the rainy season do well. The ground being full of moisture, they do not need to be watered, except to settle the soil, and they do not have to be shaded. Their roots get hold in the ground, which is warm even in the winter months, and they are ready to grow in February.

Avocado trees should be mulched with dead grass or old cover crop. Mulching preserves the moisture more uniformly, protects the roots from excessive heat and encourages the bacteria in the soil. Some cover crop should be raised between the rows.

Roots of Avocados are surface feeders, and most of the fibrous roots are in the depth of 4 inches, and therefore they will not stand for deep cultivation. If it is far enough from the trees not to disturb the roots, plowing may be done in the young grove, but it is not recommended in groves over three years old; then cultivation must be done with light tools.

Trees are apt to bloom and bear the second and third year, but they should not be allowed to mature any fruit, as in this stage of their development the fruit draws too much on the vitality of the tree and may set it back for a whole season.

The young tree should be kept growing throughout the season and will need, up to the age of 6 to 7 years, from 4 to 5 lbs. of commercial fertilizer for each year of its age; in other words, first year, 4 to 5 lbs., second year 8 to 10 lbs. and so on. After six years the amount probably can be cut down to 3 to 4 lbs. for each year.

They need a good deal of Ammonia, which should be derived from organic sources, such as Dried Blood, Tankage, Cottonseed Meal and others; a good formula contains about 4% to 5% of Ammonia, 6% to 7% Phosphoric Acid and 2% to 3% of Potash. Five to six applications should be made in the year, as it is much better to put it on in small doses but more frequently.

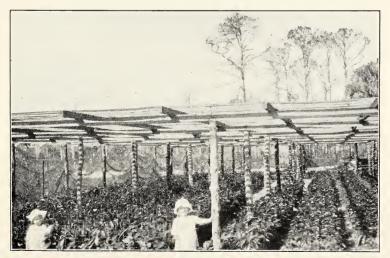
All young trees have to be protected against frost in exposed localities. Banking is the most practical in a grove.

Climatic conditions being favorable, there are always insects present on the native vegetation that adapt themselves to the Avocados. Fortunately their ways of living and the nature of the injury has been broadcasted by the Florida State Plant Board and with that knowledge it is comparatively easy to keep them in check. Some of the more important are:

Red Spider—Should the month of January be warm and dry, the red spider usually appears on the upper side of the foliage. The best way to get rid of it is to spray with Lime-sulphur solution 1:70 and repeat in 10 days. Should the trees be infested heavily before it was noticed it might be necessary to give third application in 14 days.



Four-year-old tree. Will they bear?



Part of our shade on 15th of February

Leaf Roller—May appear on the young foliage any time during the growing season; should that be in numbers to justify spraying, powdered Arsenate of Lead should be used at the rate of 1 lb. to 50 gals, of water.

Avocado White Fly is still smaller than its cousin on Citrus and causes the characteristic injury as other white flies, through exuding the honeydew in which the sooty mold develops, giving the foliage and fruit a blackish appearance. It may be controlled by spraying with oil emulsion at the rate of 1:70 or Fico 60. The best time to get them is from December to January.

Dictospermum Scale may do considerable damage on young trees, when present it can be found on the green bark and also along the ribs on the leaves. It can be controlled by thorough applications of oil emulsion 1:70 in the months of December and January.

The most practical way of keeping the trees clean is to keep them in good growing condition, inspect them from time to time, and spray them with Lime-Sulphur solution 1:70 to which is added Black Leaf 40 (Nicotine-Sulphate) at the rate of 1 to 900 about the middle of January and repeat two weeks later.

They should be attended to with the view that the first permanent branches shall not be closer to the ground than 12 to 15 inches. Occasionally there will be a tree that needs assistance to make a straight trunk. A three or four foot long stem of cabbage palmetto leaf, with the two sharp edges shaved off, makes a good stake for this purpose.

The question, which is the best Avocado to plant, so far has not been answered. The planting, to any extent, of one variety only is not to be recommended. A good way is to select from four to six varieties, including the West Indian, and interplant, as cross-pollination may be quite an important factor.

TERMS OF SALE

Trees are grafted on the West Indian stock, grown in wooden boxes 6x6x12 inches, in which they are also shipped and, unless otherwise specified, from 10 to 15 inches in height. Our well grown trees are in good demand and usually in June or July we are sold out. To avoid disappointment, order should be placed ahead of time of delivery. We begin booking orders in November and start shipping about the first of March.

Payment of 25% is required when the order is booked, balance at the time of delivery.

Cash with order for immediate shipment.

1	to	5	trees	 \$1.40	each
6	"	50	"	 1.25	"
50	"	250	"	 1.10	,,

The above prices are f.o.b. Punta Gorda or Captiva.

THE MANGO

It was said of the Mango fruit that "It is the most delicious to the taste of any in the world," and Wilson Popenoe adds, "The most wholesome and best tasted of any fruit in the world."

Seedling trees of enormous sizes are found in Fort Myers and Punta Gorda sections, producing fruit which has more or less fiber, the best of which would be worthy of cultivation.

Dating back about 35 years, the Department of Agriculture have introduced from India, trees of varieties, the fruit of which is superior in quality, color and size; the presence of fiber is so negligible that the fruit can be cut the long way and with a twist of the palms get one half free and the seed can be removed with a spoon.

Mango is usually eaten as fresh fruit, though it can be preserved in many a way. The half grown fruit, at times of a heavy crop, is thinned out and used for making Mango-butter, which comes in very handy when you get lonesome for mangoes and the fresh fruit is out of season.

There is considerable difficulty in locating the frost line in the state, but you can depend on that, in whatever locality you see the Mango doing well, that the disputed line passes there just a little to the north.

The most favorable section is along the lower coast of Florida, where the winter season is usually dry, which is essential to the production of good bloom and to insure setting of a good crop.

In regard to the soil, the tree is very adaptable and it is a known fact that even an occasional overflow will not result in any serious damage though it must not be understood that good drainage is to be altogether disregarded.

Trees should be planted at least 25 by 30 feet and young stock, being grown in boxes, can be planted at any time of the year. They will not stand for so much Ammonia from organic sources as will the Avocado, and if there is any stable fertilizer used for preparing the holes, it should not be over a peck to a tree and should be well rotted and mixed in the holes at least six weeks before planting.

Trees should be watered and mulched until well established, and we have not found it necessary to shade young trees at any time of the year.

Commercial fertilizer with a high percentage of Potash, Phosphoric Acid, and Ammonia derived more or less from chemical sources is used. The best formula is 5% to 6% of Ammonia, 7% to 9% of Phosphoric Acid and 9% to 11% of Potash.

The Mango will do well with less care than any other cultivated fruit tree, though to secure the best results the practice of mulching, cover crop and shallow cultivation must not be overlooked.

Usually they are bothered less with insects than other fruit trees, though it is practical to give one or two applications of Lime-Sulphur with Black Leaf 40 (as for Avocados) in December to January, just before they begin to grow, which in most cases will keep them clean.

Young Mango trees may bloom before they are big enough to carry the fruit; in that case the bloom should be left till it sets and the fruit is the size of an English pea, then the whole flower stem can be cut off. If the flower spike is cut off before it is fully developed, the force of the sap produces bloom on two or three highest eyes on the same branch inside of two or three weeks.

VARIETIES

CAMBODIANA—Fruit oblong, yellow-green to deep yellow, 10 to 14 oz. with thin skin, of mild sub-acid, slightly aromatic flavor of best quality. Tree is erect, compact grower, bearing heavier crops than any other Mango; it is inclined to bloom twice, so that it may have ripe fruit from June to the first days of August.

HADEN—Fruit oval to slightly oblong, plump, weighs 14 to 20 oz., skin thick about like a Trapp Avocado, deep apricot yellow, overspread with crimson scarlet, a little fibrous close to the seed, of sweet, moderately piquant flavor, good quality. Ripens July to August. Tree is strong grower and bears heavy crops. Best shipper.

MULGOBA—Fruit is a little more pointed than Haden, weighs 12 to 16 oz., deep to apricot yellow in color, overspread with scarlet on exposed side, skin thick, flesh with very pronounced aroma, free from fiber and of rich piquant flavor, excellent quality; ripens July to September. Tree is good and very symmetrical grower; not so prolific as other varieties.

RAJPURI—Fruit roundish ovate, greenish yellow in color, overspread with scarlet on the exposed side, weighs 10 to 12 oz., skin thick, free from fiber, juicy with pronounced aroma and rich piquant flavor, excellent quality, ripens July to August. Tree is vigorous, branching low and is a good bearer.

Carefully packed the Mangoes will carry in good shape anywhere in the United States; we have shipped fruit, which arrived in perfect condition, to Phoenix, Ariz., Buffalo, N. Y., and other places in the North.

Our trees are inarched, grown in boxes, and the demand for Mango trees being especially heavy, orders for larger quantities have to be placed early.

Price and Size same as on Avocados.

HONC'S AVOCADO NURSERY

We can also furnish following varieties of Avocado trees.

COLLINSON—Guatemalan and West Indian hybrid. Fruit is slightly pearshaped, nearly round, green, weights 1 to 1½ lb., ripens Dec. to Jan. Tree is good grower and prolific.

LULA—Guatemalan and Mexican hybrid. Fruit pearshaped, green, weights 1 to 1½ lb., ripens Nov. to Dec., very best quality Tree is strong grower and one of the hardiest.

TAYLOR—Guatemalan. Fruit pearshaped, green, weights 12 to 16 oz., ripens Jan. to March. Tree is good grower and productive.

EAGLEROCK—Guatemalan. Fruit nearly round, slightly rough, green, weights about $1\frac{1}{2}$ lb., ripens Jan. to Feb. Tree is good grower and productive.







Avocado is known by many as the "Alligator Pear," but how it got its name is unknown; it is certainly not a "pear" and has nothing in common with "alligators."

